



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,470	09/10/2003	Kouta Fukui	FSF-031461	2212

37398 7590 11/30/2005

TAIYO CORPORATION
401 HOLLAND LANE
#407
ALEXANDRIA, VA 22314

EXAMINER

CHEA, THORL

ART UNIT	PAPER NUMBER
----------	--------------

1752

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,470

Applicant(s)

FUKUI, KOUTA

Examiner

Thorl Chea

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on October 13, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 13, 2005 has been entered.

2. Claims 5-8 are pending in this instant application; claims 1-4, 9 have been canceled.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 5-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed fails to provide support for the language "aqueous" coating solution and "the binder in which particles of a water-insoluble hydrophobic polymer are dispersed in water" presented in claim 1. The specification on page 58, lines 23-24 discloses "the binder may be formed into coating from water, an organic solvent or an emulsion" ; page 61, last paragraph discloses " in the present invention, a polymer disperse in aqueous solvent is most preferable. Examples of the dispersed state include a latex in which fine particles of a water-insoluble hydrophobic polymer are dispersed". The specification as originally filed

Art Unit: 1752

discloses the binder may be formed into coating from water and the a water-insoluble hydrophobic polymer are dispersed in “aqueous solvent” which is different the scope of “aqueous coating” and “dispersed in the water” presented in the claimed invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Fukui et al (US 2002/0102502) and Biegler et al (US Patent No. 5,600,396). Fukui et al discloses the material of the claimed method such as shown in paragraph 4 above, but fails the thermal developing device comprising a filter to collection volatilized substance claimed in the present claimed invention. See Fukui et al on pages 35, [0385] to [0396] wherein the photothermographic material contains an organic compound an amount of 0.05 g/m². The method of developing a photothermographic material by exposing the material to 810 nm diode and heat at temperature of 120 °C for 15 second is disclosed on page 25, [0271] and page 23, [0236]. On page 17, [0185], it is disclosed a coating solution using an aqueous solvent containing 30 % by mass or more of water; the drying process is disclosed on page 25, [0265]. Page 16, [0131], discloses the binder may be coating-formed with water, an organic solvent or an emulsion; and page 16, [0143], discloses in the present invention, a polymer disperse in aqueous solvent is most preferable. Examples of the dispersed state include a latex in which fine particles of a water-insoluble hydrophobic polymer are dispersed.

Art Unit: 1752

Biegler et al discloses a photothermographic processor equipped with filter housing containing a chemical filtration media used in cleansing the gas stream from the processor. See abstract and column 2, lines 31-48. The processor is also equipped with exposure/development apparatus and shown in column 4, lines 41-48. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use device taught in Biegler to trap the odor particle in the process for forming an image using a photothermographic material taught in Fukui et al, and thereby provide an invention as claimed. The limitation such as volatilization remaining ratio of 50 % or more presented in the claimed invention is inherent to the photothermographic composition or the process taught in the prior art after the development.

7. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukui et al (US 2002/0102502) and Biegler et al (US Patent No. 5,600,396) as applied to claim 5 above, and further in view of either Kudo et al (US Patent 6,475,710) or Asanuma et al (US Patent No. 6,146,822). Kubo et al and Asanuma et al discloses the use compound of formula (I) or (II) as to improve storage stability and to enhance the sensitivity and image quality of the photothermographic material. See Asanuma et al in columns 87-98, claims 1-17 and Kudo et al in column 81, claim 1. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the compound taught in either Kudo et al or Asanuma et al in the process obtained by the combination of Fukui et al and Biegler et al with an expectation of achieving a process that provide a photothermographic material with improved image storage stability and to enhance the sensitivity and image quality of the photothermographic material, and thereby provide a process as claimed.

Response to Arguments

8. The applicants' argument is based on that the Bileger et al is related to the collection of volatized substances that re generated from organic solvent, and the image forming method using water based coating solution suffers from strains generate form organic compounds contains in the composition under the conditions of short thermal development time, in the range of 7 to 15 second, and repeated used over long period of time. The applicants further argue that "the amendment clarified that the solvent of the coating solution essentially consist of water".

The argument is not persuasive. While the applicants argue that "the solvent of the coating solution essentially consist of water", the language of the claim 5 does not reflect to the solvent used in coating solution "consist of water". The language in the claim 5 is related to "aqueous coating". The term "aqueous" is not necessarily mean that the use only water as "solvent". Applicants is referred to Webster's Ninth New Collegiate Dictionary which define the term "aqueous as : a) of, relating to or resembling water, b) made from, with or by water". Therefore, the scope of "aqueous coating" solution claimed in the present invention includes the "aqueous solvent" containing mixture of water and organic solvent taught in Fukui et al. The limitation such as "the binder is in a form of a polymer latex in which particles of a water-insoluble hydrophobic polymer are dispersible in water" is related the inherent property to the water-insoluble hydrophobic polymer taught in Fukui et al. It fails to further limit the scope of water in the aqueous coating solution. The term "organic compound" present in 5 include any additive used in the photothermographic material such as light-insensitive silver salt of an organic acid, binder, reducing agent toner and more. Bielger et al not only disclose the use of filter to remove organic solvent, but any other type of additive organic fatty acid or any

Art Unit: 1752

evaporate material. The applicants are referred to Bielger et al in column 6, claims 9-10, 13 and column 5, lines 5-13. Therefore, the worker of ordinary skill in the art would have use the filtration system taught in Bielger et al to remove any type of gas generate during thermal processing including organic fatty acid, and thereby provide a process as claimed.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tch *tc*
November 27, 2005

Thorl Chea
Thorl Chea
Primary Examiner
Art Unit 1752